

CLAIM(S):

1. A microphone construction for use in a hearing aid, the construction comprising:
 - a housing having first and second acoustic passages communicating with a microphone retaining chamber, each acoustic passage extending through the housing to an exterior surface thereof;
 - a first set of leads disposed within the housing;
 - a second set of leads disposed within the housing;
 - a microphone disposed within the microphone retaining chamber and having first and second acoustic ports in an acoustic relationship with the first and second acoustic passages, respectively; and
 - a switching mechanism comprising first and second connecting elements wherein the switching mechanism is operably secured to the housing and positionable between a first position positioning the first and second acoustic passages in an acoustic receptive state and completing a first electric circuit by connecting the first set of leads with the first connecting element and breaking a second electric circuit by disconnecting the second set of leads from the second connecting element and a second position placing either the first or the second acoustic passage in an acoustic receptive state while blocking the other acoustic passage and completing the second electric circuit by connecting the second set of leads with the second connecting element while breaking the first electric circuit by disconnecting the first set of leads from the first connecting element.

2. The construction of claim 1 wherein the switching mechanism is slidably secured to the housing.
3. The construction of claim 2 wherein the switching mechanism further comprises an arcuate recess proximate a first end and a recess proximate a second end having an acoustic seal disposed therein.
4. The construction of claim 3 wherein the first and second connecting elements comprise:
 - flat portions having a first end and a second end; and
 - a curved portion proximate the first end wherein the curved portion extends into the housing from the switching mechanism.
5. The construction of claim 1 wherein the switching mechanism is rotatably secured to the housing.
6. The construction of claim 5 wherein the first and second connectors each comprises:
 - a ball constructed of an electrically conductive material; and
 - a compressive element positioned within a bore in the switching mechanism wherein the ball is disposed on the compressive element and wherein the compressive element urges the ball toward the housing.
7. The construction of claim 6 wherein the compressive element is a compressible foam.

8. The construction of claim 6 wherein the switching mechanism further comprises first, second and third acoustic ports and a blank port, wherein when the switching mechanism is positioned in the first position, the first and second acoustic ports are in an acoustic relationship with the first and second acoustic passages within the housing and the first connector completes the first electric circuit by connecting the first set of leads and wherein the second connector is displaced from the second set of leads thereby breaking the second electric circuit and wherein when the switching mechanism is positioned in the second position, the third acoustic port is in an acoustic relationship with the first acoustic passage and the blank port seals the second acoustic passage and the second connector completes the second electric circuit by connecting the second set of leads and the first electric circuit is broken with the first connector displaced from the first set of leads.

9. The construction of claim 8 wherein the switching mechanism further comprises a first interior cavity and a second interior cavity.

10. The construction of claim 9 wherein the first connecting element comprises a first flexible metal member disposed within the first interior cavity within the switching mechanism wherein the first flexible metal member includes a first portion extending into the first interior cavity.

11. The construction of claim 10 wherein the second connecting element comprises a flexible metal member disposed within the second interior cavity within the switching mechanism the second flexible metal member having a second portion extending into the second interior cavity.

12. The construction of claim 11 wherein an end of the first and second sets of leads extend beyond a surface of the housing and into the first and second cavities respectively, such that when the switching mechanism is placed into the first position the first portion of the first connector connects the first set of leads while the second portion of the second connector is displaced from the second set of leads and wherein when the switching mechanism is positioned into the second position the second portion of the second connector connects the second set of leads while the first portion of the first connector is displaced from the first set of leads.

13. A method of reducing the number of switches within a miniature hearing aid, the method comprising:

- providing a housing having a first acoustic passage and a second acoustic passage;
- providing a microphone disposed within the housing, the microphone having a first acoustic port in communication with the first acoustic passage and a second acoustic port in communication with the second acoustic passage
- providing a first set of leads positioned within the housing;
- providing a second set of leads positioned within the housing;
- providing a switching mechanism comprising first and second connecting elements; and
- operably connecting the switching mechanism to the housing, the switching mechanism positionable into a first position wherein the first and second acoustic ports are in an acoustically receptive state and a first connecting element disposed within the switching mechanism connects the first set of leads and completes a first electric circuit while positioning a second connecting element apart from the

second set of leads thereby breaking a second circuit and wherein the switching mechanism is positionable into a second position wherein either the first or second acoustic ports is in an acoustically receptive state and the other acoustic port is in an acoustically unreceptive state and the second connecting element completes the second electric circuit by connecting the second set of leads while positioning the first connecting element apart from the first set of leads thereby breaking the first electric circuit.

14. The method of claim 13 and further comprising rotatably securing the switching mechanism to the housing such that the switching mechanism rotates between the first position and the second position.

15. The method of claim 14 and further comprising providing the switching mechanism with first, second and third acoustic ports and a port plugged with an acoustic port seal such that first and second acoustic ports are in an acoustic relationship with the acoustic passages of the housing when the switching mechanism is in the first position, and the third acoustic port is in an acoustic relationship with the first acoustic passage and the port plugged with the acoustic port seal acoustically seals the second acoustic passage when the switching mechanism is in the second position.

16. The method of claim 15 and further comprising providing an end of the first and second sets of leads extending beyond a surface of the housing and into a first and a second cavity within the switching mechanism respectively, such that when the switching mechanism is placed in the first position a first portion of the first connector connects the first set of leads while a second portion of the second

connector is apart from the second set of leads and wherein when the switching mechanism is positioned into the second position the second portion of the second connector connects the second set of leads while the first portion of the first connector is apart from the first set of leads.

17. The method of claim 13 and further comprising slidably connecting the switching mechanism to the housing wherein the switching mechanism is slidable between the first position and the second position.

18. The method of claim 17 and further comprising providing the first connector with a first curved portion which completes the first circuit by contacting the first set of leads and providing the second connector with a second curved portion which completes the second circuit by contacting the second set of leads.

19. The method of claim 18 and further comprising providing the switching mechanism having an arcuate recess proximate a first end and a recess proximate a second end having an acoustic seal disposed therein.

20. The method of claim 19 and further comprising manipulating the switching mechanism into the first position such that the arcuate recess is disposed about the first acoustic passage placing the first acoustic port of the microphone in an acoustically receptive state and the recess having an acoustic seal in the switching mechanism is positioned apart from the second acoustic passage placing the second port of the microphone in an acoustic receptive state wherein the first curved portion of the first connector connects the first set of leads and thereby completes a first electric circuit wherein the second curved portion of the second connector is positioned apart from the second set of leads thereby breaking the second circuit and manipulating the switching mechanism into the second position

such that the switching mechanism is away from the first acoustic passage thereby placing the first acoustic port into an acoustically receptive state wherein the acoustic port seal acoustically seals the second acoustic passage placing the second port of the microphone into an unreceptive acoustic state wherein the second curved portion of the second connector connects the second set of leads and thereby completes a second electric circuit while positioning the first curved portion of the first connector apart from the first set of leads and thereby breaking the first electrical circuit.